

Remarks

Applicant respectfully requests reconsideration of this application as amended. Claims 30, 35, and 41 have been amended. No claims have been canceled or added. Therefore, claims 1-2, 5-9, 11-17, 19, 22-26, 30-31, 33-35, 37-39, 41, 43-46, 50-51, 53, and 56 are presented for examination.

35 U.S.C. §101 Rejection

Claims 30-49 stand rejected under 35 U.S.C. §101 because the claimed invention is directed to non-statutory subject matter. Specifically, the Office Action states that “claims 30, 35, and 41 recited resource determinator, resource optimizer, transition type determinator, VMM operation controller, notification receiver, and operation performer are all software modules/functions.” (Office Action, 1/30/09, pp. 2-3, pt. 5.)

Claims 30-49 all are claimed as “an apparatus,” which is a statutory patentable subject matter category. Claims 30-49 have also been amended to recite “[a]n apparatus comprising a hardware platform with a processor and a memory that operate in tandem to implement” the modules described in the claims. As such, claims 30-49 are now clearly associated with computer hardware. Therefore, applicant respectfully requests the withdrawal of the present §101 rejection.

35 U.S.C. §103 Rejection

Claims 1-2, 5-9, 11-17, 19, 22-26, 30-31, 33-35, 37-39, 41, 43-46, 50-51, 53 and 56 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Robinson et al. (U.S.

Patent No. 5,522,075) and in view of Shorter (U.S. Patent No. 5,063,500). Applicant submits that the present claims are patentable over Robinson in view of Shorter.

Robinson discloses a system for implementing virtual machines (VMs) in a Virtual Machine Monitor (VMM) that utilizes separate address spaces than the VMs address space, so that the VMM can take full advantage of all of the protection rings offered by the system on which it runs and the VMs are also allowed to operate in an environment that essentially offers the same number of real protection rings as are available on the underlying computer system. (Robinson at Abstract.) Shorter discloses a method for executing distributed applications in a data processing network. (Shorter at col. 5, ll. 63-64.)

Claim 1 recites, in part, identifying, based on an instruction executed by a VMM, that an initial transition from the VMM to one or more virtual machines (VMs) is about to occur.

Applicant submits that Robinson does not disclose or suggest such a feature. The Office Action cites Robinson at column 5, lines 21-27 and at column 12, lines 34-60 as teaching identifying that a transition from the VMM to a VM is about to occur. (Office Action, 01/30/09, pg. 3, pt. 9.) However, closer examination of these cited portions of Robinson reveals that they do not teach, disclose, or suggest identifying, based on an instruction, that an initial transition from the VMM to a VM is about to occur.

Robinson at column 5, lines 21-27 discusses the receipt of a privileged instruction at a processor: “[i]f the processor receives a privileged instruction, it must first determine if it is in the proper mode to execute that instruction.” There is no discussion of identifying an initial transaction from a VMM to a VM. In fact, there is no mention of transitions, VMMs, or VMs whatsoever in this portion of Robinson.

Robinson at column 12, lines 34-60 described the classification of instructions as “sensitive” and the processor operations for sensitive instructions related to a VMM: “[f]or example, as discussed above, any instruction that halts the execution of the processor is sensitive. Further, since in the present invention only the VMM can modify the address maps, any instruction that could be executed by a VMM that could modify the address maps must also be classified as sensitive.” Nevertheless, there is no discussion of identifying that a transition from a VMM to a VM is about to occur. In fact, there is no mention of transitions from VMMs to VMs whatsoever. As a result, applicant submits that Robinson does not disclose or suggest the above-noted feature of claim 1.

Applicant further submits that Shorter does not disclose or suggest identifying, based on an instruction executed by a VMM, that an initial transition from the VMM to one or more virtual machines (VMs) is about to occur. Applicant can find no disclosure or suggestion of this feature anywhere in Shorter. As much is acknowledged in the Office Action, which only relies on Shorter to teach that the transition from the VMM to one or more VMs is an initial transition. (Office Action, 01/30/09, pg. 4, pt. 11.) Even if it is assumed that Shorter teaches that the transition is an initial transition as the Office Action maintains, neither of Robinson or Shorter teach the feature of identifying that the transition is about to occur. As such, it does not matter if Shorter teaches that the transition is an initial transition until a prior art reference is provided that teaches the base feature of identifying the transition in the first place.

As neither of Robinson nor Shorter, individually or in combination, disclose or suggest the noted feature of claim 1, claim 1, as well as its dependent claims, is patentable over Robinson in view of Shorter. Independent claims 9, 19, 30, 35, 41, 50, 53, and 56 each

recite a similar feature to the noted feature of claim 1. Therefore, claims 9, 19, 30, 35, 41, 50, 53, and 56, as well as their respective independent claims are also patentable over Robinson in view of Shorter.

Applicant respectfully submits that the rejections have been overcome and that the claims are in condition for allowance. Accordingly, applicant respectfully requests the rejections be withdrawn and the claims be allowed.

The Examiner is requested to call the undersigned at (303) 740-1980 if there remains any issue with allowance of the case.

Applicant respectfully petitions for an extension of time to respond to the outstanding Office Action pursuant to 37 C.F.R. § 1.136(a) should one be necessary. Please charge our Deposit Account No. 02-2666 to cover the necessary fee under 37 C.F.R. § 1.17(a) for such an extension.

Please charge any shortage to our Deposit Account No. 02-2666.

Respectfully submitted,

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